

2012 WSSA Committee Progress Report January 2013

Committee Code and Name: Herbicide Resistant Plant Committee – E12

Committee Chair: William Vencill

Committee Members, 2012: Al-Khatib, K. (2015-WC); Jha, P. (2015-W); Skibo, A. (2015-NEWSS); Smeda, R. (2013-NC); Tardif, F. (2013-C); Burgos, N. (2014-S); Burke, I. (2015-W); Kniss, A. (2015-W); Huff, J. (2015-NC)

Board Coordinator: Mike Owen

Committee Members Rotating Off: R. Smeda, F. Tardif

Suggested Replacements:

2012 Summary of Activities:

- See attached.

2012 Plan for Committee Activities

- See attached.

Recommendations for Board/Society Action:

- See attached.

Present: William Vencill, Les Glasgow, Siyuan Tan, Alejandro Perez-Jones, Ian Burke, Carol Mallory-Smith, Neil Harker, Andrew Kniss, Vijay Nandula, Robert Nichols, Barb Glenn, Mark Peteron, Jeff Ellis, Ian Heap, Jeff Stachler, John Soteres, Mike Chandler, Francois Tardif, Prashant Jha

Introduction –

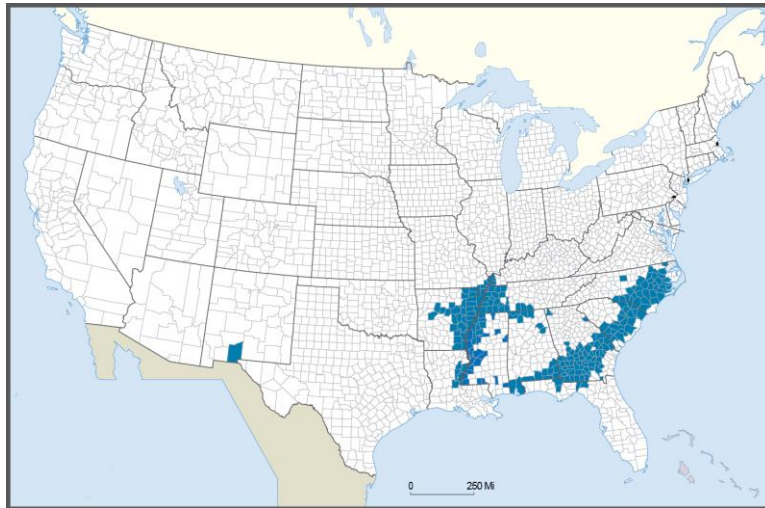
Resistant Weed Update

NEWSS

In most of the region, we are dealing with the same weeds that have been a problem for the last several years. GR horseweed continues to be our most common GR weed and is spreading West and North and is quite common through the southern half of the Northeast through central PA. Suspected GR Palmer amaranth has reached the southern part of the region. We had a number of problems with controlling it this past year in MD and DE, but we have not confirmed resistance yet. Even if the populations are not resistant, we know we have to be on our toes to not let resistance develop. This past summer in PA, we discovered our first population of common waterhemp, which appears to be a problem on a farm in south central PA. We hope this is an isolated problem. We are also starting to see increasing problems with the GR ragweeds. We have a case of suspected GR giant ragweed in western NY. It seems a combine was purchased from somewhere in Ohio and it's suspected that this ragweed came along for the ride. Giant ragweed is not that common in NY, but there's a patch (about 5 acres in size) that was not well controlled in soybeans with glyphosate in 2010. The field was in corn in 2011 and sprayed with glyphosate plus 4 fl oz of Banvel or Clarity with good results. In a quick greenhouse assay, rates up to 88 fl oz/A of Roundup PowerMax showed mixed results; 2 of 5 plants at each size that were not killed at this rate, only injured, but we did not have the necessary susceptible plants to compare for confirmation. ALS-resistant common chickweed is becoming more common in the southern half of the region that includes MD, VA, DE, and PA. We confirmed a resistant population in southeast PA in a trial in 2011 in winter barley. The populations appear cross resistant to most ALS herbicides. The herbicide Starane (fluroxypyr) is one better products for control in winter cereal grains. As of now, no new reports of herbicide resistance are reported in the New England states. (Bill Curran, Russ Hahn, John Jemison, and Mark VanGessel)

SWSS

GR *Amaranthus palmeri* widespread in AL, AR, FL panhandle, GA, LA, MS, NC, SC, and TN and present in KY, VA, and boothill of MO. Here is a map of GR *A. palmeri*



GR *Lolium* widespread in AR and MS

GR *Conyza canadensis* widespread in TN, AL, MS, KY, and VA

Multiple-herbicide resistant *Amaranthus* and *Lolium* a growing concern.

NCWSS

Stachler – There are confirmed GR *Conyza canadensis* and *Kochia* in North Dakota. There is suspected GR *Kochia* in MN, but not confirmed. GR *Ambrosia artemisiifolia* widespread in Red River Valley. GR *Amaranthus tuberculatus* present in every north central state and multiple-herbicide resistant *Amaranthus tuberculatus* is becoming more common.

HPPD-R *Amaranthus tuberculatus* present in IA, IL, and NE. 2,4-D resistant *A. tuberculatus* discovered in a seed production field in NE.

ALS/ACC-R *Setaria viridis* and *Avena fatua* in ND barley.

WSWS

Ian Burke discussed 2,4-D resistant prickly lettuce in WA. Glyphosate resistant weeds are not widespread.

Carol Mallory-Smith provided an overview of resistant weeds in OR. Glyphosate- and glufosinate-resistant *Lolium* is present and expanding. Target-site resistant glufosinate-resistant *Lolium* has been confirmed. There are now *Lolium* populations that have multiple resistance to

ACCase, ALS, PS II, EPSP, GS, and flufenacet. Flufenacet resistance is the most recent herbicide to which resistance has been confirmed. Flufenacet-resistant ryegrass populations are not cross resistant to pyroxasulfone. ALS-R brome has been discovered in WA and OR.

GR *Kochia* has been confirmed in WY, NE, and MT.

Canada

Francois Tardif

GR *Ambrosia artemisiifolia* and *A. trifida* in Ontario. There seems to be 50-100 populations in a survey of fields in Ontario. GR *Conyza canadensis* confirmed in Ontario in 2010. Of 105 populations sampled, 86 were found to be resistant. There is a wider geographic distribution of GR *Conyza* than *Ambrosia*.

GR *Kochia* has been confirmed in Alberta. *Kochia* is the number one weed in the plains provinces. Probably 90% is ALS-R and probably cross resistant to other herbicides.

Hugh Beckie has initiated a National Glyphosate Stewardship program in Canada based on the program in Australia.

Multiple-herbicide resistant *Avena fatua* in western Canada. Mitotic-herbicide resistant *Avena fatua* confirmed.